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EXAMINER

LETT, THOMAS J

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,917

Applicant(s)

ABEL ET AL.

Examiner

Thomas J. Lett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 21-30 and 33-38 is/are rejected.
- 7) ☐ Claim(s) 31 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Appeal Brief, filed 25 September 2006, with respect to claims 1-38 have been fully considered and are persuasive. The finality of claims 1-38 has been withdrawn.
2. Applicant argues that while the Farrell '493 reference may disclose estimating the consumable resources required to print the print job, it does not disclose providing printer parameters indicative of resources including an available amount of consumables. With regard to the limitation of providing such printer parameters, the Office states that "database 24 includes records 50 that contain data useful to estimate consumables required, col. 4, lines 5-17" (Final Office Action, p.3; emphasis added). The Farrell '493 reference discloses that an "estimation process 9 ... uses a record, selected by database reader 8, to estimate, or predict, consumable resources required to print a future job" (col. 4, lines 10-13). However, the Farrell '493 reference is silent as to ascertaining the available amount of consumables (for example, at a particular printer or printing system). Because the estimation process 9 of estimator 10 of the Farrell '493 reference does not know the available amount of consumables, it cannot make a determination whether sufficient consumables exist to print the print job.

Examiner responds that before carrying out another printing request, the printing machine uses the recorded information to make a prediction or estimate of resources required to carry out the printing request. The printing machine thus reduces uncertainty about whether there are enough resources to satisfy the next request, and

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alleviates the burden of maintaining excessive consumables in inventory, col. 6, lines 35-46. The printing is therefore using its use information to give an estimate of what additional resources it will need to produce a future print job taking into account what it already has in inventory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 29-30 and 34-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Farrell et al (USPN 6,266,493 B1).

With respect to claim 29, Farrell et al disclose a method for estimating consumables requirements for a print job, comprising:

providing printer parameters indicative of resources of a predetermined printer including an available amount of consumables (database 24 includes records 50 that contain data useful to estimate consumables required, col. 4, lines 5-17);

originating the print job at a first computer at a first network node (print job may be initiated from any of user interface 12 or printing systems 2, col. 2, lines 26-32.

Examiner notes that each element in a system is a network node.);

communicating the print job to a second computer at a second network node (Examiner notes the printers 2 in the system 1 of Farrell et al send data to the Estimator 10. Farrell discloses that Estimator 10 may be located at printing systems 2 as well as user interface 12, col. 2, lines 37-39. All of these locations are different nodes. Thus the Estimator 10 can send the data to a second node.);

at the second computer (printing system 2, containing Estimator 10, col. 2, lines 37-39), analyzing the print job to determine print job parameters that affect a required amount of the consumables (col. 4, lines 49-61);

based on the print job parameters, estimating at the second computer the required amount of the consumables required to print the print job (col. 4, lines 49-52);

based on the printer parameters and the required amount of the consumables, making a determination at the second computer whether sufficient consumables exist to print the print job (col. 4, lines 49-52); and

communicating the determination from the second computer to the first computer (operator is notified, col. 6, lines 11-16).

With respect to claim 30, Farrell et al disclose a method of claim 29, wherein the printer parameters are indicative of an ink type, and an ink cartridge or ink reservoir type installed in the predetermined printer (step 55, col. 5, lines 55-56 and col. 6, lines 30-34).

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With respect to claim 34, Farrell et al disclose a method of claim 29, wherein the print job parameters are indicative of an ink type, a print media type, a number of pages to be printed, and a print quality (col. 4, lines 30-34).

With respect to claim 35, Farrell et al disclose a method of claim 29, comprising:
sending the print job from the first computer to the predetermined printer
(Examiner notes the printers 2 in the system 1 of Farrell et al send data to the Estimator 10. Farrell discloses that Estimator 10 may be located at printing systems 2 as well as user interface 12, col. 2, lines 37-39. All of these locations are different nodes. Thus, Estimator 10 can send the data to a second node.).

With respect to claim 36, Farrell et al disclose a method of claim 29, comprising:
identifying at the second computer at least one alternative printer having sufficient consumables to print the print job, and communicating the identity of the at least one alternative printer to the first computer (Examiner notes the printers 2 in the system 1 of Farrell et al send data to the Estimator 10. Farrell discloses that Estimator 10 may be located at printing systems 2 as well as user interface 12, col. 2, lines 37-39. All of these locations are different nodes. Thus, Estimator 10 can send data to an alternative node.).

With respect to claim 37, Farrell et al disclose a method of claim 36, comprising:
at the first computer, selecting one of the alternative printers and sending the print job from the first computer to the alternative printer (Examiner notes the printers 2 in the system 1 of Farrell et al send data to the Estimator 10. Farrell discloses that Estimator 10 may be located at printing systems 2 as well as user interface 12, col. 2,

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lines 37-39. All of these locations are different nodes. Thus, Estimator 10 can send the data to a second node.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6-9, 21, 22, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al (USPN 5,383,129) in view of Motamed (USPN 6,356,359 B1).

With respect to claim 1, Farrell discloses a method for estimating ink usage of a print job, comprising:

connecting a computer peripheral device (printer section 8, col. 6, lines 49-53) to a host computer (user interface 52, col. 6, lines 21-28) having predefined information relating to the peripheral device (system operation information, col. 6, line 26); and

offering pricing and estimation of ink and image consumables for completing the print job, before the print job is performed (cost of consumable materials for printing or rendering is input to the system to be used for estimation purposes, col. 8, lines 14-17).

Farrell does not expressly disclose using a plurality of different printers including the computer peripheral device.

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Motamed teach of the sending of a job 84 to a plurality of printers and estimation of consumable usage prior to printing, see at least col. 5, lines 29-31.

Farrell and Motamed are analogous art because they are from the similar problem solving area of estimating printing material and cost. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the network estimation feature of Motamed to the standalone print system 2 of Farrell in order to obtain an estimation system of networked print systems for estimating printing material and cost as an improvement of the Farrell invention, see col. 1, lines 40-50. The motivation for doing so would be to improve the capability of estimation for a plurality of machines.

With respect to claim 2, Farrell discloses a method of claim 1, wherein the host computer (user interface 52, col. 6, lines 21-28) is linked to a generic printer driver located on the host computer (image generator processors 86, col. 6, lines 49-51).

With respect to claim 6, discloses a method of claim 1, further comprising determining printing parameters for choosing a print option that best fits budgetary and printing requirements of the print job (the method of Farrell estimates billing based on good materials usable to the customer and can exclude materials that are deemed useless to a customer for more efficient pricing, col. 8, lines 20-32).

With respect to claim 7, Farrell discloses a method of claim 6, wherein the printing parameters includes at least one of print quantity, print quality, print type and paper type (the method of Farrell estimates billing based on good materials usable to

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the customer and can exclude materials that are deemed "bad quality" to a customer for more efficient pricing, col. 8, lines 20-32).

With respect to claim 8, Farrell discloses a method of claim 6, wherein the printing parameters are ascertained by a remote printer driver (control section 7, col. 6, lines 1-4) and forwarded to a server (the unit cost of print jobs will be obtained from a database, col. 8, lines 52-56).

With respect to claim 9, Farrell discloses a method of claim 8, wherein the printing parameters are incorporated by the server (the unit cost of print jobs will be obtained from a database, col. 8, lines 52-56) in data files (lookup table, col. 8, lines 37-45) to be used by various combinations of instrumented drivers and printers located on the server and shared by other printers connected to the server (image generator processors 86, col. 6, lines 49-51).

Claim 21 a means claim is rejected for the same reason as claim 1.

Claim 22 a means claim is rejected for the same reason as claim 2.

Claim 26 a means claim is rejected for the same reason as claim 6.

With respect to claim 27, Farrell does not disclose selecting one of the plurality of different printers and sending the print job to the selected printer.

Motamed teach of the sending of a job 84 to a one or more of a plurality of printers and estimation of consumable usage prior to printing, see at least col. 5, lines 29-31.

Farrell and Motamed are analogous art because they are from the similar problem solving area of estimating printing material and cost. At the time of the

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invention, it would have been obvious to a person of ordinary skill in the art to add the network estimation feature of Motamed to the standalone print system 2 of Farrell in order to obtain an estimation system of networked print systems for estimating printing material and cost as an improvement of the Farrell invention, see col. 1, lines 40-50.

The motivation for doing so would be to improve the capability of estimation for a plurality of machines.

With respect to claim 28, Farrell et al ('129) do not disclose the method of claim 1, wherein the peripheral device and at least some others of the plurality of different printers are located at different network nodes.

Motamed teach of the sending of a job 84 to a one or more of a plurality of printers and estimation of consumable usage prior to printing, see at least col. 5, lines 29-31. As shown in figure 11, the printers are located at different nodes.

Farrell and Motamed are analogous art because they are from the similar problem solving area of estimating printing material and cost. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the network estimation feature using a plurality of printers of Motamed to the standalone print system 2 of Farrell in order to obtain an estimation system of networked print systems for estimating printing material and cost as an improvement of the Farrell invention, see col. 1, lines 40-50. The motivation for doing so would be to improve the capability of estimation for a plurality of machines.

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5. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitachi Koki Imaging Solutions, Inc. (HiKIS) (Office World News; Oct. 2000; vol. 28, issue 10; pgs 30-31) in view of Farrell et al (USPN 6,266,493 B1).

With respect to claim 10, HiKIS et al disclose a method for analyzing ink usage for a printer, comprising:

communicating a type of ink cartridge and ink reservoir system to a host computer as part of a print job submission (i-manage allows customers/users of a printing machine to check a printer's equipment including consumables such as an ink cartridge, para. 4);

HiKIS does not disclose estimating the ink to be used in a print job based on predefined printing requirements; and

determining the number of print swaths and pages the ink cartridge can complete based on ink available in the ink reservoir system.

Farrell et al ('493) teaches that the system can make a prediction/estimate of resources (*ink and pages are resources*) required to carry out a print request, col. 4, lines 7-13.

HiKIS and Farrell et al ('493) are analogous art because they are from the similar problem solving area of estimating printing material and cost. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the estimation feature of Farrell et al ('493) to the i-printer of HiKIS in order to obtain an estimation print system for estimating printing material and cost. The motivation for doing so would be to estimate quantities prior to executing print jobs.

With respect to claim 11, HiKIS discloses a method of claim 10, further comprising relaying the determined information to a user (the system can monitor usage of the print system and send out preventative maintenance regarding replacement of consumables such as toner cartridges indicating that the system can estimate ink usage, para. 6).

With respect to claim 12, HiKIS discloses a method of claim 11, further comprising providing the user with a plurality of options, including allowing the print job to proceed, choosing an alternative printing system (users can send print jobs to multiple printers, para. 8), and ordering ink consumables for the printer (para. 4).

With respect to claim 13, HiKIS discloses a method of claim 12, further comprising offering the user upgrade options, including ordering a generic stand alone printer driver and a server printer driver (users can connect to suppliers and web sites for supplies, sales, and customer support via an embedded web browser, para. 4).

With respect to claim 14, HiKIS discloses a method of claim 11, further comprising providing the user with a hyperlink via the Internet to a supplier of the printer for automatic ordering of the ink consumables (users can connect to suppliers and web sites for supplies, sales, and customer support via an embedded web browser, para. 4).

6. Claims 3-5 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (USPN 5,383,129) in view of Lin et al (USPN 6,757,070 B1).

With respect to claim 3, Farrell does not disclose that the host computer is linked to a remote printer driver in a server system. Lin et al teach of a universal print driver,

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col. 4, lines 54-66 linked to a host computer (client computer 20, col. 4, line 56) in a server system (client/server printing system 12, col. 3, lines 31-34).

Farrell and Lin et al are analogous art because they are from the similar problem solving area of connecting remote drivers. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the universal print driver feature of Lin et al to the system of Farrell in order to obtain a print driver useable by a client. The motivation for doing so would be to access a print driver.

With respect to claim 4, Farrell does not disclose that the server supplies information pertaining to a number of instrumented drivers and printers to the host computer. Lin et al teach of a server sending data items 114 such as a printer driver to the web browser window 18 of client computer 20, col. 5, lines 1-9.

Farrell and Lin et al are analogous art because they are from the similar problem solving area of obtaining driver information. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the universal print driver feature of Lin et al to the system of Farrell in order to obtain print driver information useable by a client. The motivation for doing so would be to access a suitable print driver.

With respect to claim 5, Farrell does not disclose that the remote server is linked to the host computer via at least one of the Internet or a local intranet. Lin et al teach of a server sending data items 114 such as a printer driver to the web browser window 18 of client computer 20, col. 5, lines 1-9.

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Farrell and Lin et al are analogous art because they are from the similar problem solving area of obtaining driver information. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the universal print driver feature of Lin et al to the system of Farrell in order to obtain print driver information useable by a client. The motivation for doing so would be to access a suitable print driver.

Claim 23 a means claim is rejected for the same reason as claim 3.

Claim 24 a means claim is rejected for the same reason as claim 4.

Claim 25 a means claim is rejected for the same reason as claim 5.

7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al (USPN 6,266,493 B1) in view of (HiKIS) (Office World News; Oct. 2000; vol. 28, issue 10; pgs 30-31).

With respect to claim 33, Farrell et al does not disclose a method of claim 29, wherein the printer parameters include an identification number indicative of a particular consumable item, the identification number queryable to determine if the particular consumable item is replaced.

HiKIS teaches that users can connect to suppliers and web sites for supplies, sales, and customer support via an embedded web browser, para. 4. Suppliers would support any consumable that needs to be replaced or any product that has to be repaired.

Farrell et al ('493) and HiKIS are analogous art because they are from the similar problem solving area of monitoring print consumables. At the time of the invention, it

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would have been obvious to a person of ordinary skill in the art to add the i-printer of HiKIS to the estimation feature of Farrell et al ('493) in order to obtain a print system for monitoring printing material. The motivation for doing so would be to maintain adequate consumable levels for printing.

8. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al (USPN 6,266,493 B1) in view of Weichmann et al (USPN 6,580,524 B1).

With respect to claim 31, Farrell et al does not disclose a method of claim 30, wherein the printer parameters are further indicative of a printhead temperature of the predetermined printer.

Weichmann et al teach of using statistical methods to compensate for the temperature parameter that affects a print job because of a resultant change in viscosity by the time a print job is to be printed, col. 5, line 61 – col. 6, line 9.

Farrell et al and Weichmann et al are analogous art because they are from the similar problem solving area of printer management. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the temperature compensation feature of Weichmann et al to Farrell et al in order to obtain a printer device which can compensate for printhead temperature. The motivation for doing so would be to adjust for temperature increases.

With respect to claim 32, Farrell et al does not disclose a method of claim 31, wherein the printhead temperature affects ink usage, the estimating including adjusting the required amount of the consumables based on the printhead temperature.

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Weichmann et al teach of using statistical methods to compensate for the temperature parameter that affects a print job because of a resultant change in viscosity by the time a print job is to be printed, col. 5, line 61 – col. 6, line 9.

Farrell et al and Weichmann et al are analogous art because they are from the similar problem solving area of printer management. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the temperature compensation feature of Weichmann et al to Farrell et al in order to obtain a printer device which can compensate for printhead temperature. The motivation for doing so would be to adjust for temperature increases.

9. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al (USPN 6,266,493 B1) in view of Motamed (USPN 6,356,359 B1).

With respect to claim 38, Farrell et al ('493) does not disclose based on the print job parameters, estimating a cost of the consumables required to print the print job, and communicating the cost to the first computer.

Motamed teach of the sending of a job 84 to a one or more of a plurality of printers and estimation of consumable usage prior to printing, see at least col. 5, lines 29-31 so that the department server 96a (reads on first computer) can track costs. Farrell and Motamed are analogous art because they are from the similar problem solving area of estimating printing material and cost. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the department accounting 100 feature of Motamed to the standalone print system 2 of Farrell in order to obtain an estimation system of networked print systems for estimating printing

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material. The motivation for doing so would be to improve the capability of estimation for a plurality of machines.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Lett whose telephone number is (571) 272-7464. The examiner can normally be reached on 7-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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